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RURAL AND WILDLAND FIRE PROTECTION
JEFFERSON COUNTY, MONTANA 59501

JEFFERSON COUNTY
RURAL AND WILDLAND FIRE PROTECTION PLAN

Forestry Division
Department of Natural Resources and Conservation

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This Fire Plan defines Jefferson County's role in cooperation with the Department of Natural Resources and Conservation, Division of Forestry, in providing Wildland Fire Protection to private and State ownerships in Jefferson County.

Jefferson County, through this document, is requesting to enter into a cooperative fire protection agreement with the State of Montana to better meet Jefferson County's fire protection responsibilities.



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MONTANA





I. GENERAL DESCRIPTION OF JEFFERSON COUNTY

Jefferson County encompasses 1,056,640 acres of private, State and Federal lands. The Boulder River, which bisects the county, flows southeast from its origin in the Deer Lodge National Forest, through the town of Boulder and joins the Jefferson River near Cardwell. The Jefferson River constitutes the southern boundary of the county and flows east into the Missouri River. Boulder, the county seat is located on Interstate 15, 28 miles south of Helena and 33 miles north of Butte. Interstate 90 crosses the southern portion of the county in an east-west direction. The land ownership of Jefferson County is as follows:

TABLE 1: LAND OWNERSHIP OF JEFFERSON COUNTY

<u>Land Ownership</u>	<u>Acres</u>	<u>Percentage of Total</u>
Private and Municipal	457,159	44.0%
State of Montana	40,166	4.0%
Federally Administered	559,315	52.0%
TOTAL	1,056,640	100.0%

The topography of Jefferson County ranges in elevation from 9,414 feet at Crow Peak in the Elkhorn Mountains to 3,930 feet at Prickly Pear Creek. The high mountain slopes support open stands of limber pine, subalpine fir and Douglasfir. Soils are generally shallow, coarse and rocky with frequent rock outcrops. Douglasfir and lodgepole pine are the dominant timber species on the mid-mountain slopes where soils are deeper and more developed.

Vegetation on the broad valley that is located in the center of Jefferson County varies from sagebrush and scrub juniper, to cultivated crops and native grasses.

TABLE 2: LAND USE IN JEFFERSON COUNTY

<u>Land Use</u>	<u>Acres</u>	<u>Percentage of Total</u>
Native Range	487,338	46.1%
Woodland	479,818	45.4%
Cropland	45,131	4.3%
Dry Pasture	21,870	2.1%
Other	22,483	2.1%
TOTAL	1,056,640	100.0%



Jefferson County's population has historically been located along the road and river corridors in the valley bottom. In the last ten years, however, rural subdivision has dispersed the county's population. In the three years from 1970 through 1972, a total of 889 acres have been subdivided in Jefferson County. Housing construction has occurred primarily north of Jefferson City, in Lump Gulch and in the Montana City areas.

TABLE 3: RURAL AND URBAN POPULATION OF JEFFERSON COUNTY--1970

	<u>Population</u>	<u>Population Density</u>
Rural	2,231	
Boulder	1,342	
Whitehall	1,035	
Basin	300	
Clancy	230	
Jefferson City	100	
TOTAL	5,238	3.2/sq. mile*

*Approximate Figure (1978 population: 8,000; 1979 projected at 10,000)

II. FIRE HISTORY AND WEATHER PATTERNS

Fire history data was compiled from four sources, the Bureau of Land Management, the U.S. Forest Service, the State Division of Forestry and the State Fire Marshall's Office. County Volunteer Fire Department records, obtained from the Fire Marshall's office probably do not reflect the overall county fire situation. Many small fires are extinguished by local rural residents and are never reported. The State Fire Marshall's Office estimates that only 25% of the total number of wildland fires have been reported.

The wildland fire load in Jefferson County is moderate to high, with fifty to sixty fire starts per year. Approximately sixty-five percent (65%) of the fires are located within the county protection area. Lightning is the number one fire ignitor. Lightning strikes are concentrated in a broad band running southwest to northeast across the county (See Map #2). Lightning fires in these areas present a problem in suppression because of the high elevation and the inaccessability to fire vehicles.

Mancaused fires are generally located in areas with adequate access such as recreational areas, areas of logging activity and near homesites. Mancaused fires constitute 31% of the wildland fires annually in Jefferson County. Campfires and burning of ranch stubble and logging slash are the most frequent mancaused ignitors.



The fire history of Jefferson County is shown in Table 4:

TABLE 4: FIRE HISTORY OF JEFFERSON COUNTY

	<u>SOURCE OF DATA</u>		
	<u>Montana Div. of Forestry</u>	<u>U.S. Forest Service</u>	<u>Bureau of Land Management</u>
Years of Data	10	10	10
Average number of wildland fires per yr.	7	20	5
Percent mancaused	39	35	20
Average fire size in acres	.88	2.70	no record

Three Top Mancaused Ignitors:

- (1) Campfires
- (2) Debris Burning
- (3) Smoking

Length of Fire Season: May through September

Interpolation of this data for a limited portion of Jefferson County together with discussions with county volunteer fire department members indicates that the estimated annual fire load per volunteer fire department is as follows:

TABLE 5: PROJECTED ANNUAL WILDFIRE ACTIVITY IN
JEFFERSON COUNTY'S PROTECTION AREA

<u>Volunteer Fire Department</u>	<u>Number of Wildfires Per Year</u>
Whitehall	12
Boulder	11
Clancy	6
Jefferson City	4
Basin	3
Proposed Elk Park	5
Proposed Montana City	<u>4</u>
TOTAL	45 fires



III. CURRENT FIRE HAZARDS, RISKS AND VALUES AT RISK

A. FIRE HAZARDS

A fire hazard is a fuel situation. Hazards, or fuels, are grouped according to kind, amount, condition, location in relationship to threat of ignition and suppression difficulty. The fuel types are shown on Map #5 (Back Cover Jacket).

1. Forest Harvest Debris Fire Hazards (Slash Fuels)

An average of 6.2 million board feet of timber are harvested yearly on private lands in Jefferson County (Table 6). These timber harvesting activities create approximately 18,540 tons of slash fuels each year. Fires in slash accumulation areas tend to be large and very costly to suppress. Timber harvesting often occurs in areas of concentrated lightning activity. In addition, road construction for harvesting activities provides public access resulting in an increased probability of man-caused fire ignition.

TABLE 6: BOARD FEET OF TIMBER HARVESTED FROM PRIVATE LANDS
IN JEFFERSON COUNTY CALENDAR YEARS 1973-1977

<u>Year</u>	<u>Board Feet Harvested</u>
1973	3,667,512
1974	4,466,150
1975	3,607,280
1976	11,768,574
1977	7,390,083

2. Insect, Disease and Wind Damage Fire Hazards

Western Spruce Budworm attacks in epidemic proportions are found in timber stands throughout Jefferson County. If these epidemics are not abated in 4-6 years, the infected areas will create heavy fuel accumulations exhibiting a high resistance to fire control. These fuels are dry from May to June which coincides with periods of heavy lightning activity.

Some timber stands throughout Jefferson County are susceptible to wind damage. Once again, these produce heavy fuel accumulations and a high resistance to wildfire control.



3. Range and Grassland Fire Hazards

Light grassy fuels which ignite readily and are susceptible to rapid fire spread make up the majority of fuels within Jefferson County's fire protection boundaries. These fuels are in areas of heavy human use and pose a fire danger during the months of May through September.

B. FIRE RISKS

A fire risk is an ignitor; something that starts a fire.

1. Lightning Risk

Fire occurrence data indicates that lightning is the major fire ignitor in Jefferson County. Lightning also ignites fires in high and inaccessible locations. No method presently exists to reduce the lightning risk; but accurate plotting of storm patterns, prompt reporting of lightning storm activity and rapid detection of fires can significantly reduce the fire size and resource loss resulting from lightning fires.

2. Mancaused Risks

Man's activities ignite fires in Jefferson County within narrow corridors along highways, railroads, water courses and near towns and recreational use areas.

Several logging operations are in progress in Jefferson County at any given time during the fire season. Fires within these harvesting operations are a risk to forest growth, products being harvested, valuable equipment used during harvest operations and adjacent subdivisions or home sites.

Burning of farm and ranch stubble presents a risk of wildland fire during portions of the fire season. The flashy fuels associated with farm and ranch lands are susceptible to rapid fire spread and pose a significant risk to ranches, homes, farm equipment and livestock.

The Burlington Northern and the Milwaukee Railroad main lines cross Jefferson County. The greatest impact of the railway system is the risk of multiple fire starts in the flashy fuels along these railway corridors.



C. VALUES AT RISK FROM FIRE

1. Forest Products Values at Risk

The Lodgepole pine and Douglasfir timber resource within Jefferson County is concentrated mainly in and adjacent to National Forest boundaries. More than 7 million board feet of timber were harvested from private lands during 1977 in Jefferson County. This forest resource represents a significant financial value to landowners, loggers and mill employees in and around Jefferson County.

2. Ranch and Farm Values at Risk

Numerous livestock ranches are located within Jefferson County. Several thousand head of livestock graze throughout the spring and summer months and normally winter at ranch headquarters, feeding on hay cropped from meadow lands. Although livestock grazing tends to reduce the amount of fuel available to a fire, the livestock and forage resource needed to sustain stocking levels represent a significant value at risk.

3. Wildlife Value at Risk

Jefferson County supports resident herds of antelope, white-tail deer, mule deer, elk and mountain goat. Water areas along the Boulder and Jefferson Rivers provide essential food and cover for migratory waterfowl populations. This wildlife population represents a significant resource to the landowners and residents of neighboring communities.

4. Rural Residences and Commercial Establishments Values at Risk

Jefferson County through the years has remained a rural area, but the effect of rural subdividing is rapidly beginning to become evident. Extensive home construction is especially apparent in and around Clancy, Montana City and Jefferson City. These residences and commercial establishments represent a considerable value at risk, while the increased human habitation also presents a greater potential for mancaused fires.

5. Industrial Values at Risk

Approximately one dozen post and pole yards and sawmills are located within Jefferson County. These mills play a significant role in local economics and represent a definite value at risk when considering the investment in machinery, equipment and wood products.



6. Utilities and Railroads Values at Risk

Electrical power and telephone lines are concentrated in areas of habitation and along main highways. These transmission lines serve many rural and urban homesites and business establishments within Jefferson County and represent a value to be protected.

The Burlington Northern railway crosses the county from Helena to Basin and along with the Milwaukee railway crosses the southern portion of the county. Railroad main line circuitry and associated equipment is vulnerable to fire damage.

7. Soil, Water, and Air Quality Values at Risk

Fire, depending on its size and intensity, can adversely affect soil stabilization, water quality, and air quality. The watersheds and airsheds of Jefferson County should be protected from the effects of severe or repeated burning of forest fuels.

8. Recreation Values at Risk

Camping, fishing, and boating are popular summertime activities within Jefferson County. The forested zones are important hunting areas throughout the year. A large, severe forest fire could have adverse effects on recreational, scenic, and wildlife resources.



IV. CURRENT FIREFIGHTING CAPABILITY OF JEFFERSON COUNTY

A. ORGANIZATION

1. Structural

- (a) The County Commissioners and the organized Volunteer Fire Departments are responsible for structural fire protection in Jefferson County. There are three volunteer fire departments in the county that restrict their activities to within established boundaries. These departments are:
 - (1) Boulder Rural Fire District
 - (2) Jefferson Valley Rural Fire District (Whitehall)
 - (3) Basin Rural Fire District
- (b) Two volunteer fire departments have no defined boundaries and respond to fires whenever called. These two departments are:
 - (1) Clancy Volunteer Fire Department
 - (2) Jefferson City Volunteer Fire Department
- (c) Structural protection in the rural areas, outside of these Volunteer Fire Department response areas, is largely left up to the individual property owner with some assistance from the county.

2. Wildland

(a) Privately Owned Lands (457,159 acres)

The State of Montana provides fire protection to all forested lands within forest fire districts and to individual properties within affidavit units. This protection is provided either directly by the State, or by the State through contract with the U.S. Forest Service. Jefferson County has the responsibility for fire protection on approximately 410,568 acres of privately owned lands outside of the forest fire districts, and for those lands not signed up within affidavit units. This county protection is presently being provided by the individual volunteer efforts of rural residents and Volunteer Fire Departments. Jefferson County, through this document, is requesting to enter into a cooperative fire control agreement with the State of Montana to better meet its fire protection responsibilities.

(b) State Owned Lands (40,166 acres)

The State of Montana itself directly provides fire protection to all of its forested lands in Jefferson County. The State delegates the fire protection for its non-forest lands to the State lessee. A State-County cooperative agreement would aid the lessee of State land in providing the basic level of fire protection to the resources on these lands.

(c) Federally Owned Lands (559,315 acres)

The U.S. Forest Service and the Bureau of Land Management provide protection to lands which they administer. These agencies fight all wildland fires which are on or are a direct threat to their lands. Fires which are not a direct threat are monitored by those agencies, with no suppression actions being taken.



TABLE 7: WILDLAND FIRE PROTECTION RESPONSIBILITY IN
JEFFERSON COUNTY

<u>Protection Agency</u>		<u>Acres of Protection</u>
County	Private Lands	372,886
	State Lands	<u>37,682</u>
	TOTAL COUNTY	410,568
State of Montana	Private Lands	51,059
	State Lands	<u>2,484</u>
	TOTAL STATE	53,543
Federal Agencies	Federal Lands	559,315
	State Lands	0
	Private Lands	<u>33,214</u>
	TOTAL FEDERAL	<u>592,529</u>
		TOTAL 1,056,640

B. TRAINING

Training of volunteer firefighters in forest fire suppression has not been readily available to the Departments. Fire training assistance would be available through the State Division of Forestry as a part of the cooperative agreement.

Structural fire training programs are available through the Montana Fire Academy.

C. FIRE PREVENTION

1. Educational Measures

The State of Montana and the U.S. Forest Service carry out fire prevention activities within their protection boundaries in Jefferson County. These activities include mass media information coverage on the fire danger, posting of roadside prevention posters and visits by prevention personnel to recreation areas. Local schools participate in the Keep Montana Green Poster Contest.

2. Law Enforcement

State Law 28-603, authorizes the county governing body to issue burning permits. This authority is exercised by Jefferson County with the various Fire Departments or Sheriff's office in charge of permit administration. The State of Montana, and the U.S. Forest Service administer the issuance of burning permits within their protection boundaries, and also inspect timber harvesting and other forest operations for compliance with the forest rules and regulations.



D. DETECTION, REPORTING AND COMMUNICATIONS

Fire detection flights by the State of Montana and the U.S. Forest Service cover a major portion of the county during the summer months. Strawberry Lookout provides direct visual coverage of the lightning belt in the northern portion of the county. Local residents are very fire conscious and report fires they detect to the Volunteer Fire Departments.

Communications within the rural areas under county protection is by telephone or citizens band radio. Fire calls are made to the County Sheriff's office, City Police, or to the local fire department. Volunteer members are alerted by siren or by a telephone call. Fire reports within State and Federally protected areas are forwarded to these agencies for individual fire response by that agency.

E. PRESUPPRESSION

1. Transportation Systems

Primary road systems in the county are shown on Map #7 (Back Cover Jacket). Most of the county protection area is accessible by four wheel drive vehicles. Unimproved airports are located at Boulder and Whitehall for use by light aircraft.

2. Equipment and Manpower

(a) Boulder Rural Fire Department*

- 16 - Volunteer Firemen
- 1 - 1,000 gallon pumper
- 1 - 500 gallon pumper
- 1 - 100 gallon pumper

(b) Whitehall Volunteer Fire Department*

- 22 - Volunteer Firemen
- 1 - 750 gallon pumper

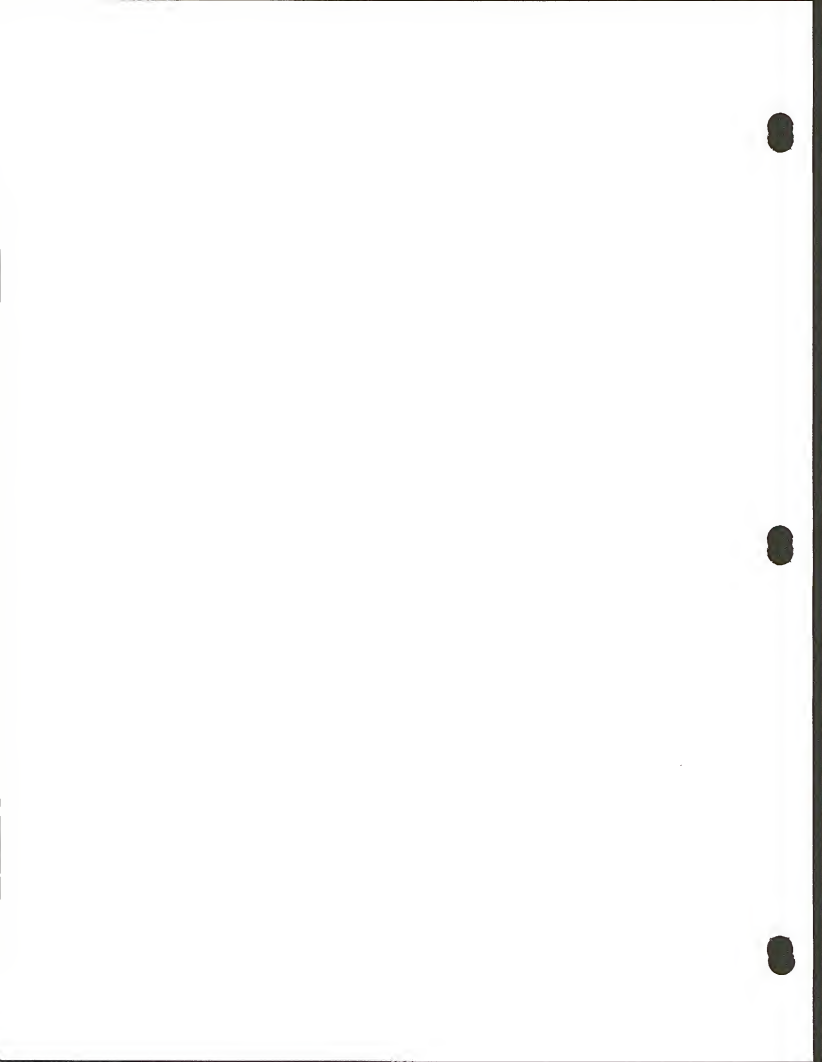
(c) Basin Volunteer Fire Department*

- 28 - Volunteer Firemen
- 1 - 500 gallon tanker
- 1 - 500 gallon pumper

(d) Clancy Volunteer Fire Department

- 28 - Volunteer Firemen
- 1 - 900 gallon pumper
- 1 - 300 gallon 4-wheel drive pumper

*Use restricted to within the fire protection boundary



(e) Jefferson City Volunteer Fire Department

10 - Volunteer Firemen
1 - 350 gallon pumper

(f) Jefferson County

4 ea. - Graders
3 ea. - Loaders
2 ea. - Tractors w/backhoe
1 ea. - D-5 Dozer
2 ea. - Lowboy

(g) Private

A variety of privately owned heavy equipment, farm machinery and vehicles could be mustered locally if needed.

F. SUPPRESSION

1. Dispatching and Initial Attack

Fire reports are made to the appropriate fire protection agency. Initial attack dispatches by the Sheriff's office and the Volunteer Departments are based on information provided in the detection report. Apparently many fires in the rural areas are not reported unless they become large enough to require support from the local fire agencies.

2. Coordination and Support

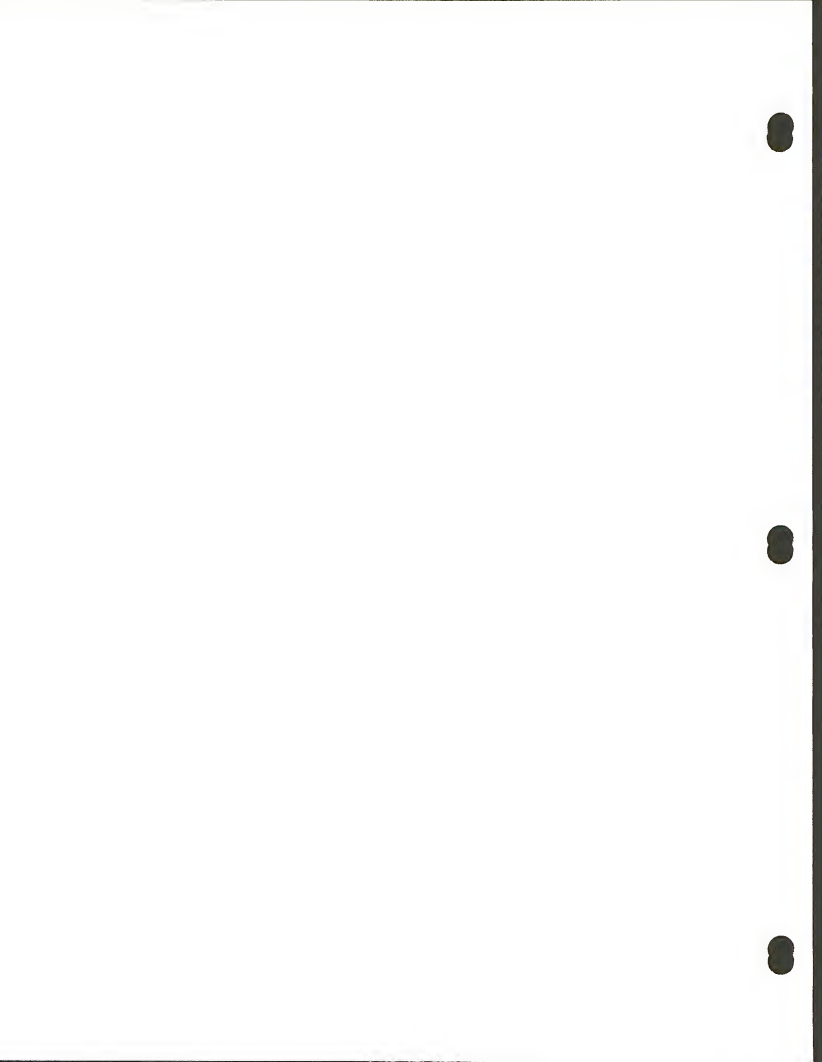
Each individual fire department operates independently of the other organizations in Jefferson County. County suppression actions in outlying areas are supported only by the county itself and whatever volunteer manpower and equipment that may be found.

3. Cooperative Agreements and Mutual Aid Assistance

There are no cooperative agreements for mutual aid within Jefferson County, or between Jefferson County and neighboring counties.

4. Disaster Planning

The Whitehall Volunteer Fire Department is active in medical services in cooperation with the Whitehall Police Department. Disaster planning is coordinated through the Civil Defense Director and the Jefferson County Sheriff's Office. Ambulance services are available in both Boulder and Whitehall.



G. FUNDING

1. Rural Fire Departments (\$7,400-\$10,600)

The Volunteer Fire Departments with established Fire Protection Districts received funds from 1977 tax assessments as follows:

Boulder	\$6,400
Whitehall	\$2,500
Basin	<u>\$1,640</u>

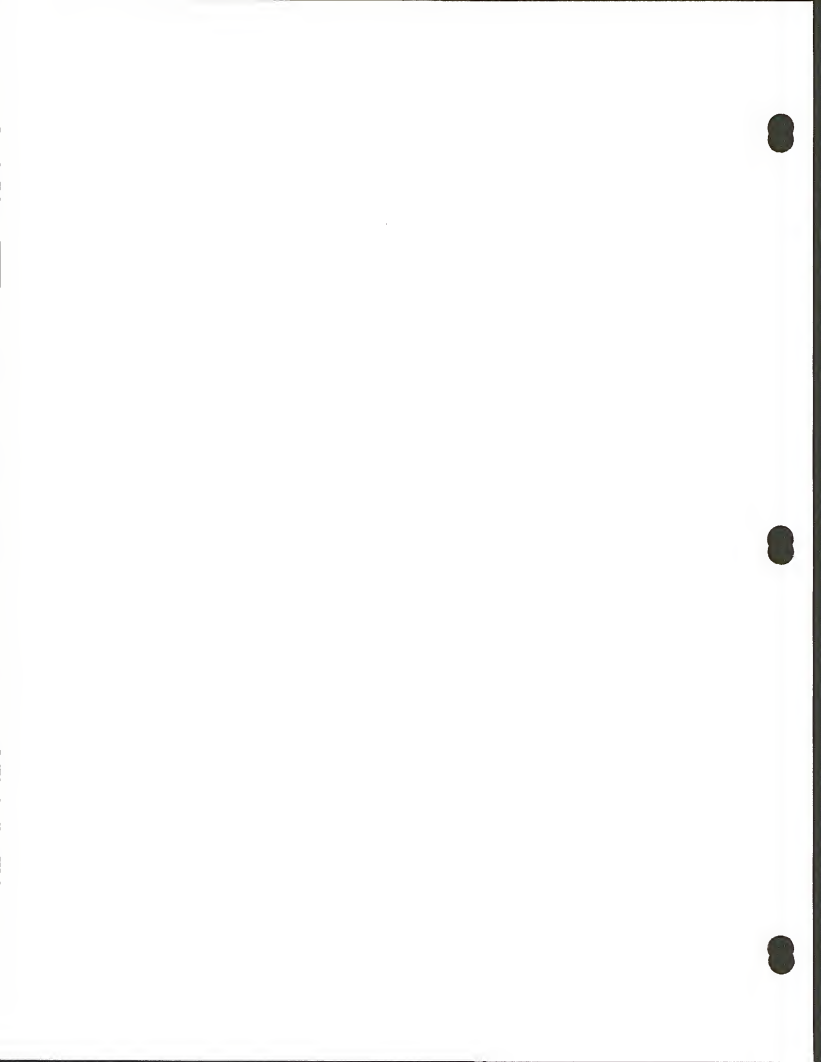
\$10,540*

The remaining two Volunteer Fire Departments operate from volunteer contributions.

*Total assessments vary on a yearly basis from \$7,400 to \$10,600.

2. Volunteer Efforts

It is difficult to assess the economic value of the many hours of service provided by volunteers involved in fire control. The donated time in training, meeting attendance, and fire control efforts alone is worth several thousand dollars annually.



V. PROTECTION NEEDS

A. ORGANIZATION AND PLANNING

The County working with the State should:

1. Enter into a cooperative fire control agreement with the State of Montana. This action will enable Jefferson County to supplement, and improve its fire protection of State and private natural resources in the county's area of responsibility.
2. Form a county rural fire council. This body would serve in an advisory capacity to assist in identifying and solving problems throughout the county. The county should also appoint a County Firewarden.
3. Develop a state-county annual operating plan. This should serve to identify manpower and equipment needs and proposed locations, areas of responsibility, communications procedures and organizational structure.
4. Clarify initial attack boundaries for each volunteer company.
5. Assist landowners in the formation of Volunteer Fire Departments in Elk Park, and in Montana City.

B. TRAINING

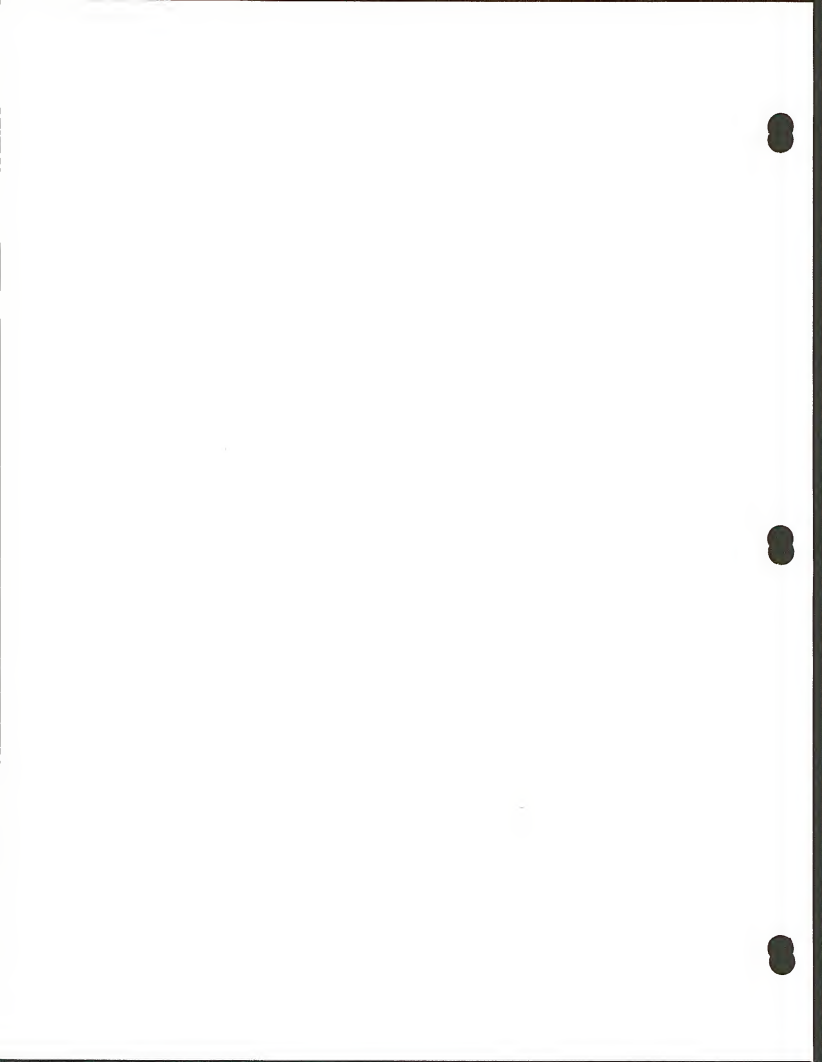
The County working with the State should:

1. Provide basic wildland fire training to volunteers as outlined in the annual operating plan.
2. Provide equipment operations training to volunteers; especially to users of State-owned equipment.
3. Provide specific and advanced wildland fire training to the County Firewarden.
4. Identify unique training needs, such as suppression of fires which are ignited by train derailments. Assist with filling those needs.

C. FIRE PREVENTION

The county working with the State should:

1. Coordinate specific prevention efforts as outlined in the annual operating plan. There is an obvious need to direct prevention efforts at the debris burning of stubble fields and logging debris and at those individuals abandoning campfires.
2. Coordinate county fire closure requests, as needed.



3. Send letters to landowners, industries and organizations asking them to cooperate with specific fire prevention measures as during periods of extreme fire danger.
4. Present fire prevention programs to schools and youth organizations.
5. Participation in fairs and parades.
6. Conduct fire prevention patrols and inspections.
7. Promote fire prevention measures in subdivision planning.

D. DETECTION, REPORTING and COMMUNICATIONS

The County working with the State should:

1. Identify specific detection and communications problems, list them in the annual operating plan and outline methods to solve these problems. Mobile radios installed in initial attack tankers would allow mobility throughout the county and reduce initial attack response times.

E. PRESUPPRESSION

1. Equipment

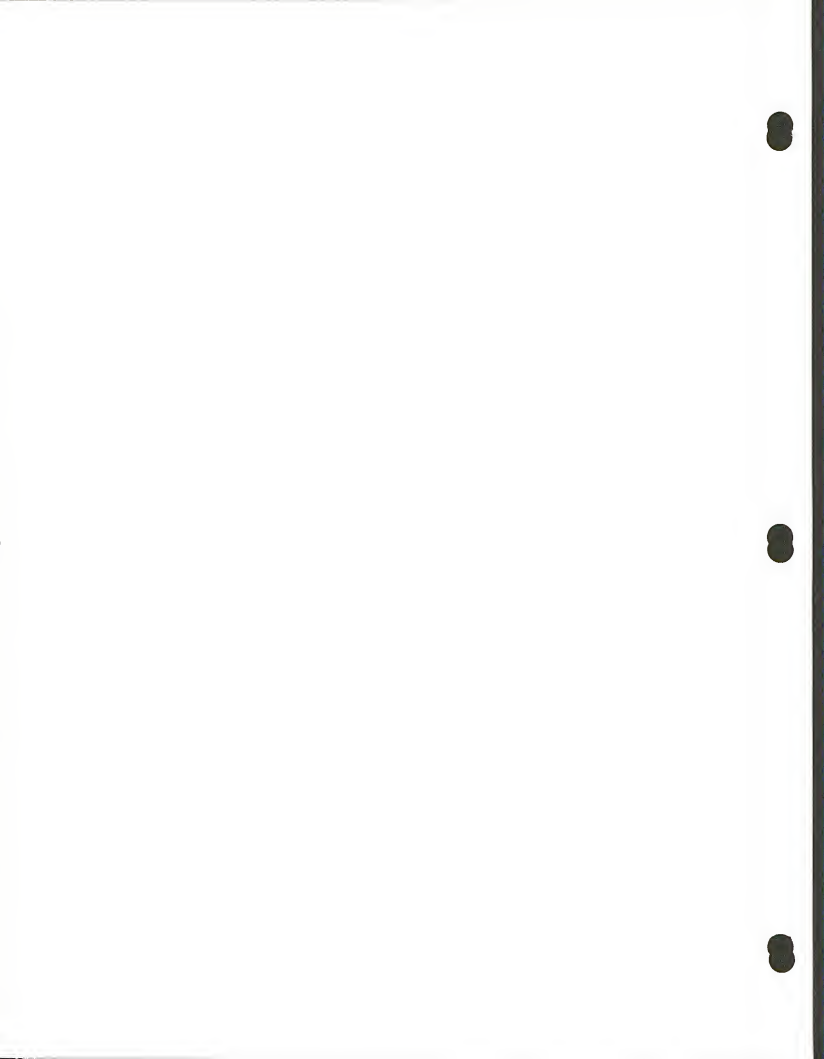
An analysis of the available information indicates that the State of Montana should provide to Jefferson County the following equipment:

- (a) 3 - 5 man tool units
2 - 10 man tool units
These tool units should be located at Whitehall, Cardwell, Boulder, Elk Park and Basin
- (b) 4 - Initial Attack Tankers--200 gallon capacity
These units should be located in Boulder, Whitehall and Cardwell.
1 - Medium Tanker--500 gallon capacity.
This unit should be located at Elk Park.

These tankers should be 4-wheel drive trucks with tanks, fire pumps and tool complements.

2. Manpower

Formation of Volunteer Fire Companies at Elk Park and at Montana City will add approximately 40 more volunteer firemen in Jefferson County. An increase in available tools, equipment and training is also expected to produce an increase in fire control participation by local residents.



F. SUPPRESSION

1. Dispatching and Initial Attack

Formation of additional volunteer fire companies, clarification of attack boundaries and the placement of additional tools and equipment in the county will improve the countywide dispatching and attack system.

2. Cooperative Agreements

(a) State of Montana

A cooperative fire control agreement between Jefferson County and the State of Montana will enable the county to receive assistance in organization and planning, equipment procurement, wildfire control training, and fire prevention efforts. In addition, the county will be afforded state support, if needed, in a fire emergency situation. The State will benefit by receiving protection on the 37,682 acres of State land and the 372,886 acres of private lands.

(b) Lewis & Clark, Gallatin, Broadwater and Silver Bow Counties

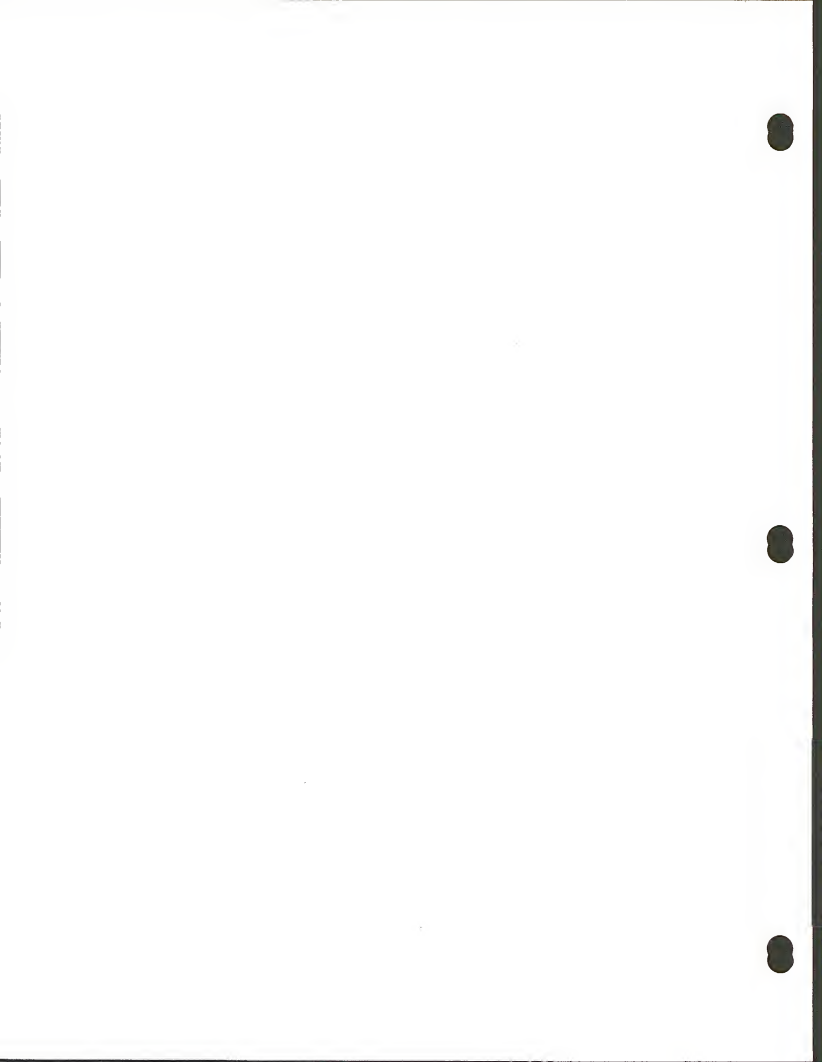
A mutual aid fire protection agreement should be entered into between Jefferson County and the counties of Lewis & Clark, Gallatin, Broadwater and Silver Bow. This agreement would facilitate cooperation on boundary line fires, and would provide for the use of State-owned fire equipment across county lines. Lewis & Clark, Gallatin, Broadwater and Silver Bow counties already participate in the State-County Cooperative Fire Program.

(c) Rural Fire Departments and Volunteer Fire Companies

The County should assist the Rural and Volunteer Departments in completing mutual aid agreements between departments. These agreements would allow mutual support outside of protection boundaries.

(d) Madison County

A mutual aid fire protection agreement should be entered into between Jefferson and Madison Counties. This agreement would facilitate cooperation on boundary line fires. Madison County is not presently enrolled in the State-Cooperative fire program.



VI. PROPOSED FISCAL PLAN

The proposed fiscal plan for the State-County Cooperative Fire Program is summarized in Tables 8, 9 and 10. Detailed and itemized expenditures will be outlined in the annual operating plan. Jefferson County's expenditures are based on current operating levels and anticipated cost increases. They include volunteer efforts of local fire forces. State expenditures are based on the needs that this plan indicates as necessary for the State to cooperate in a fire control program.

TABLE 8: JEFFERSON COUNTY'S EXPENDITURES
IN A COOPERATIVE FIRE CONTROL PROGRAM*

	<u>First Year</u>	<u>Second Year</u>	<u>Continuous</u>
Fire Organization & Planning	\$ 818	\$ 818	\$ 818
Wildland Fire Training	1,836	1,461	1,461
Wildland Fire Suppression	12,000	12,000	12,000
Wildland Fire Equipment	1,600	1,600	1,600
Fire Prevention	940	940	940
Fire Detection & Reporting	110	110	110
Other (Utilities)	<u>1,080</u>	<u>1,080</u>	<u>1,080</u>
TOTAL	\$18,384	\$18,009	\$18,009

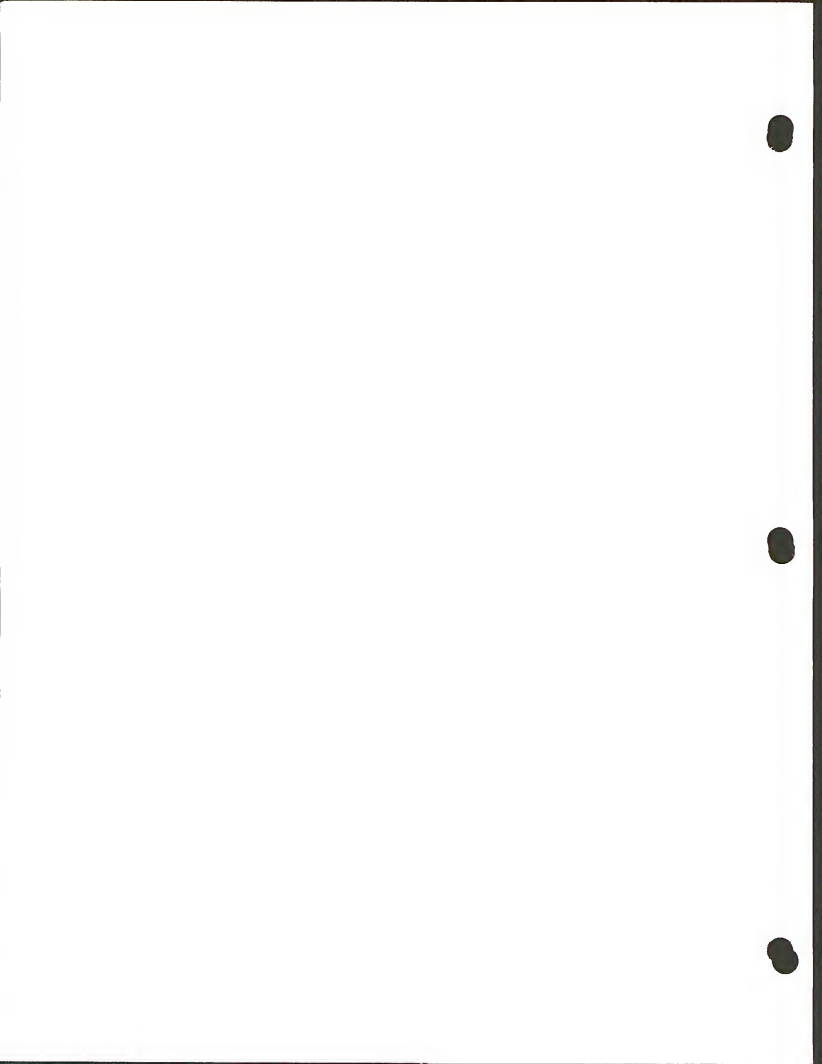
TABLE 9: STATE OF MONTANA'S EXPENDITURES
IN A COOPERATIVE FIRE CONTROL PROGRAM*

	<u>First Year</u>	<u>Second Year</u>	<u>Continuous</u>
Salaries and Wages	\$14,022	\$14,583	\$15,166
Contracted Services	300	500	500
Supplies and Materials	2,200	2,200	1,700
Communications & Transportation	50	50	50
Utilities	100	100	100
Travel	700	700	500
Repairs & Maintenance	2,300	1,500	500
Capital Equipment	<u>11,850</u>	<u>7,200</u>	<u>2,000</u>
TOTAL	\$31,522	\$26,833	\$20,516

TABLE 10: COMBINED STATE AND COUNTY EXPENDITURES*

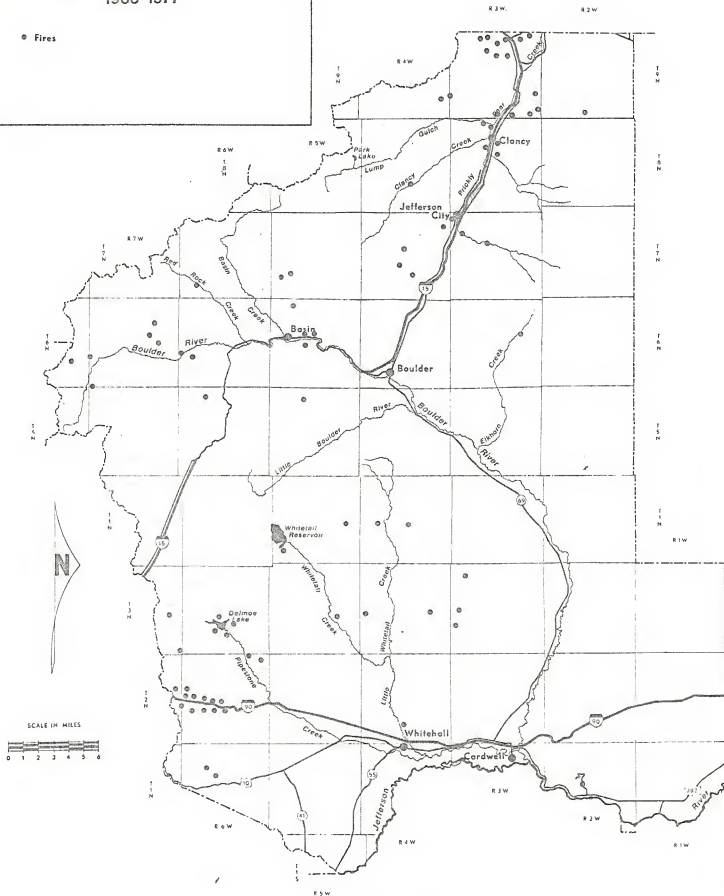
	<u>First Year</u>	<u>Second Year</u>	<u>Continuous</u>
Jefferson County	\$18,384	\$18,009	\$18,009
State of Montana	<u>31,522</u>	<u>26,833</u>	<u>20,516</u>
TOTAL	\$49,906	\$44,842	\$38,525

*These figures will need to be adjusted annually due to increases caused by inflation, etc.

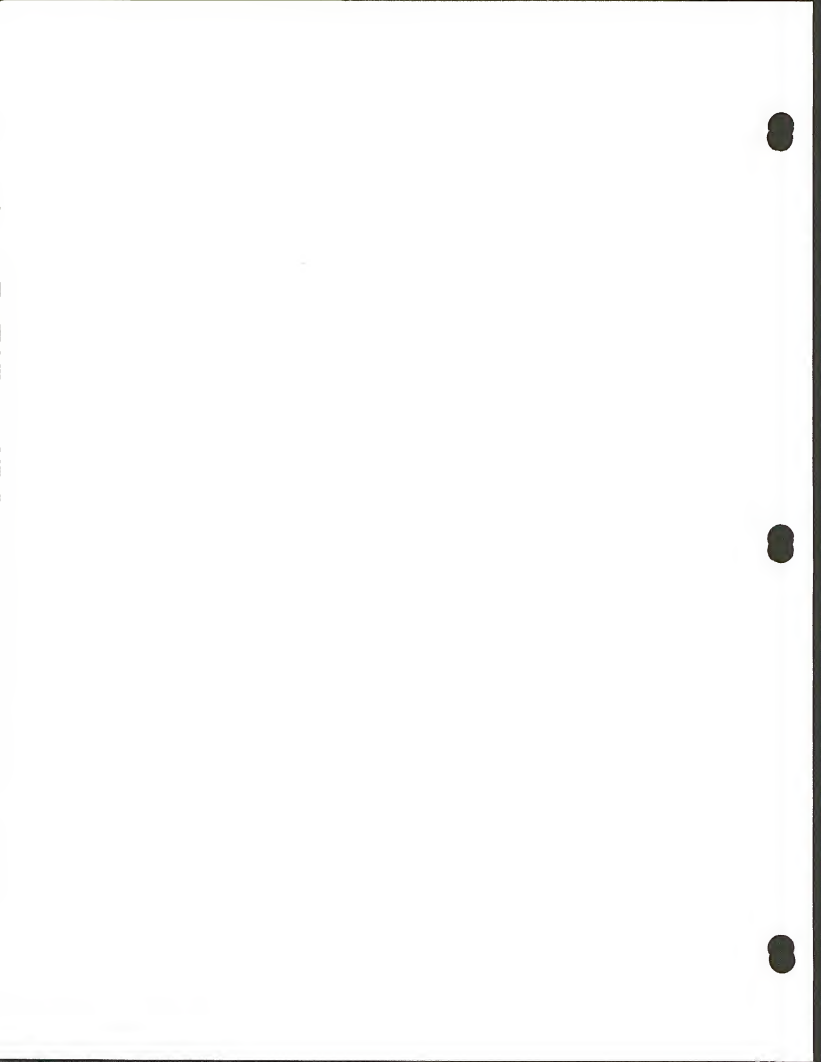


**MAN-CAUSED FIRES
1968-1977**

• Fires



Map No. 2



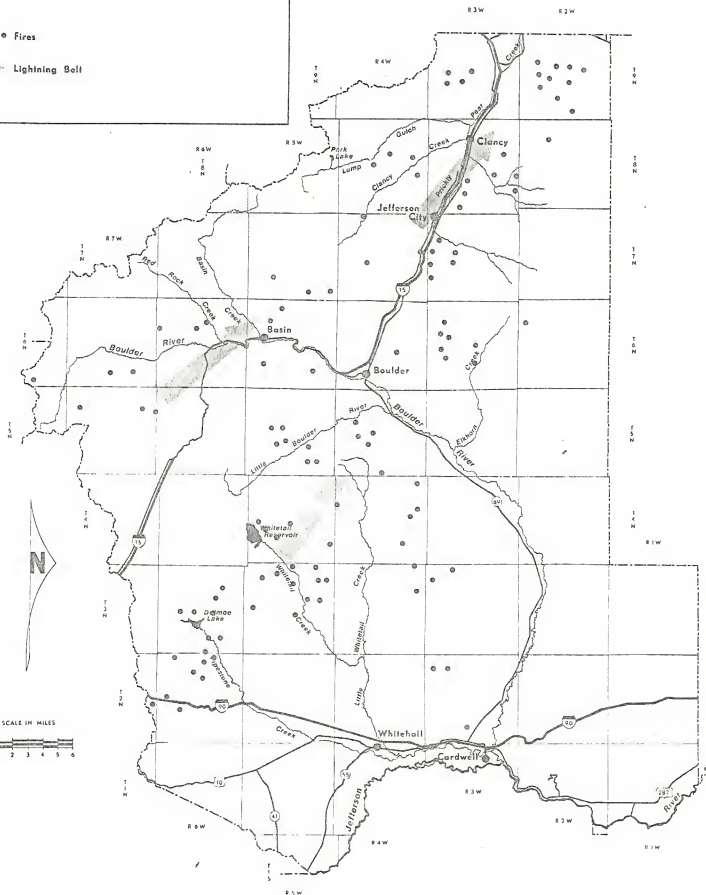
LIGHTNING CAUSED FIRES 1968-1977

• Fires

Lightning Bolt

SCALE IN MILES
0 1 2 3 4 5 6

Map No. 2a



RECOMMENDED VOLUNTEER FIRE DEPARTMENT PROTECTION AREAS



Willow Creek Rural Fire District (Gallatin Co.)

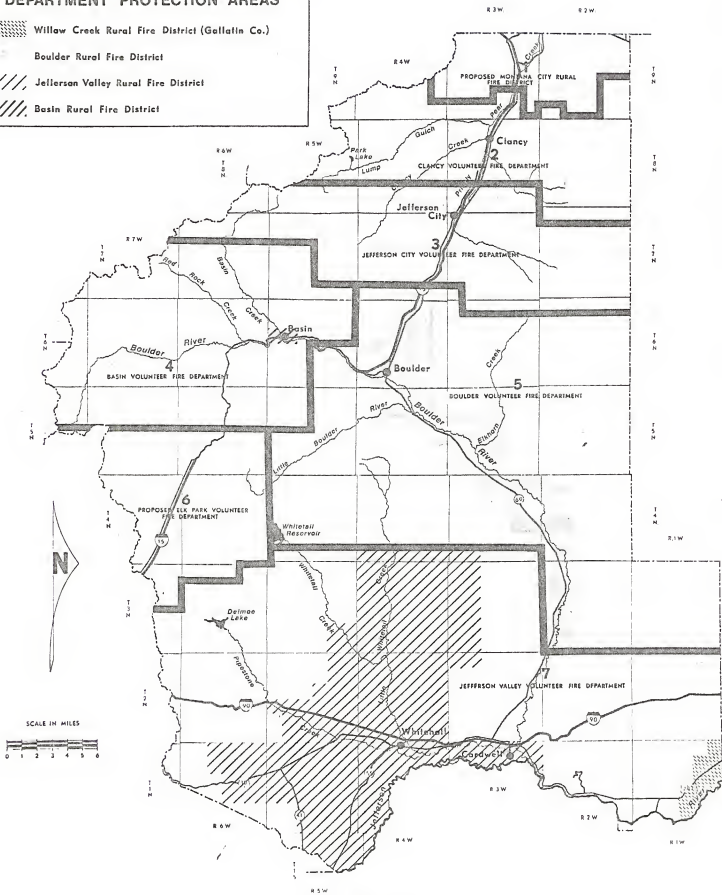
Boulder Rural Fire District

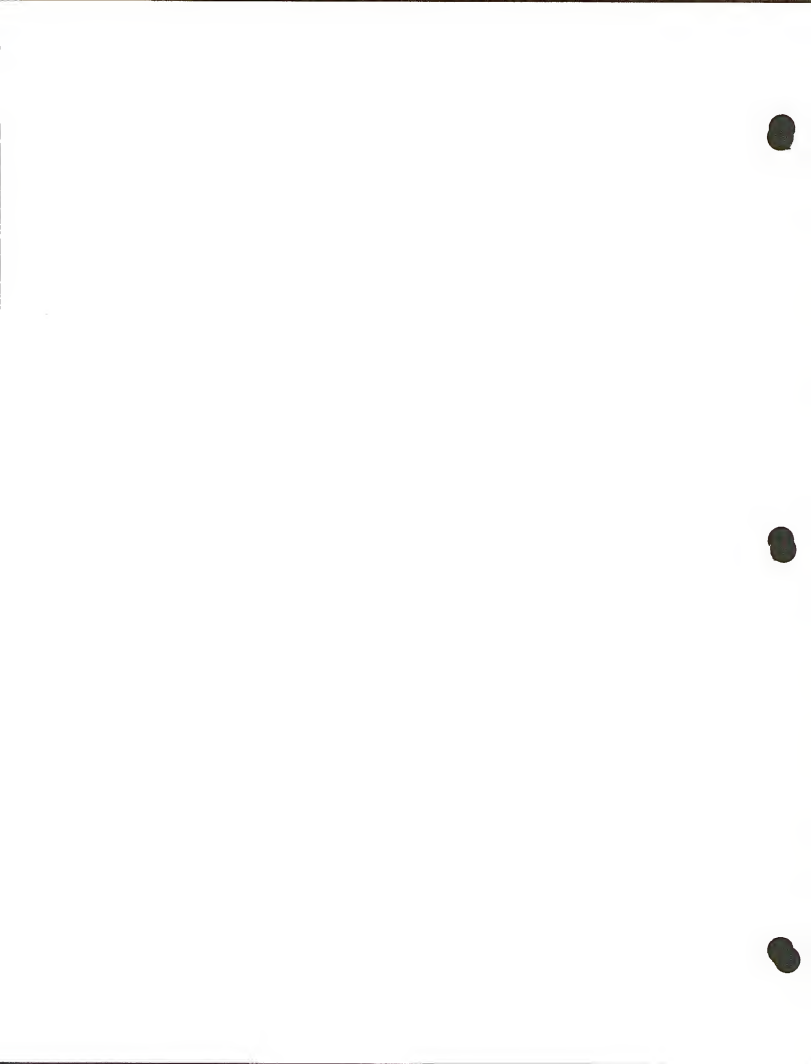


Jefferson Valley Rural Fire District



Basin Rural Fire District



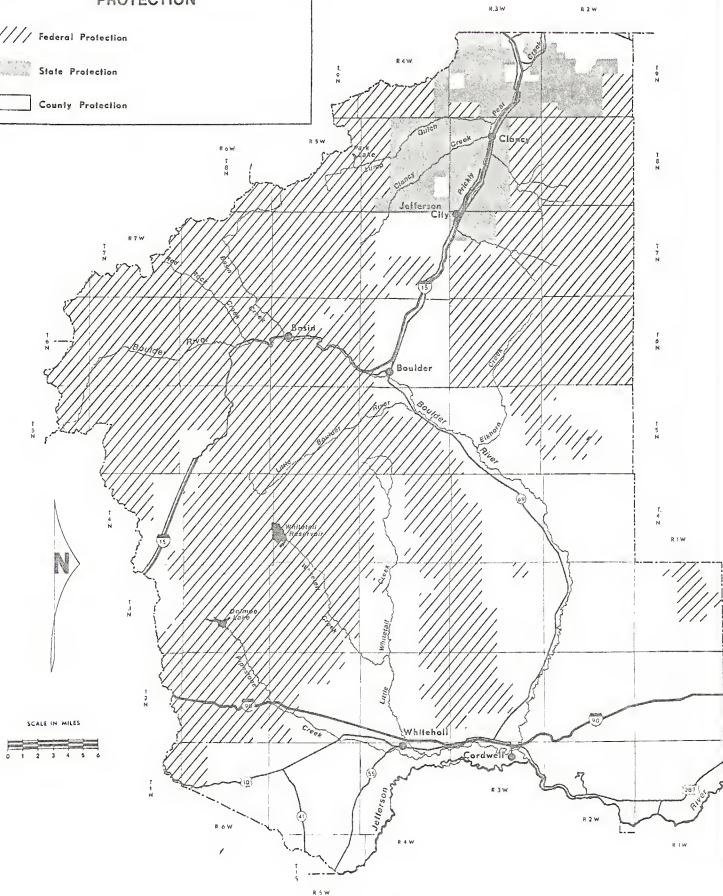


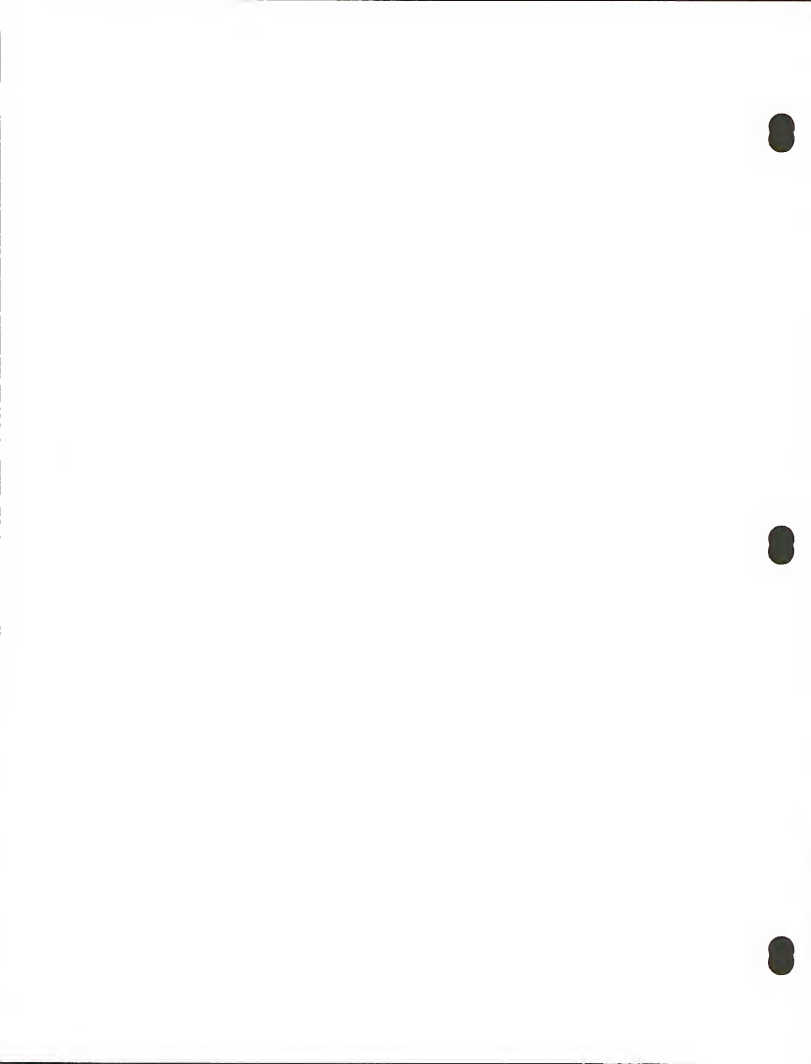
FEDERAL , STATE AND COUNTY PROTECTION

Federal Protection




State Protection

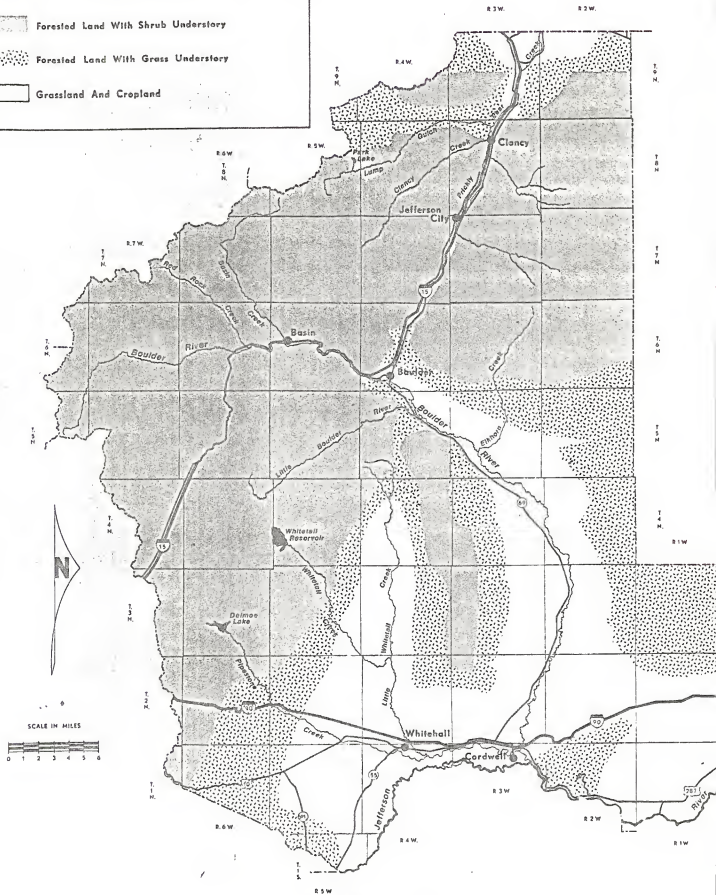
County Protection



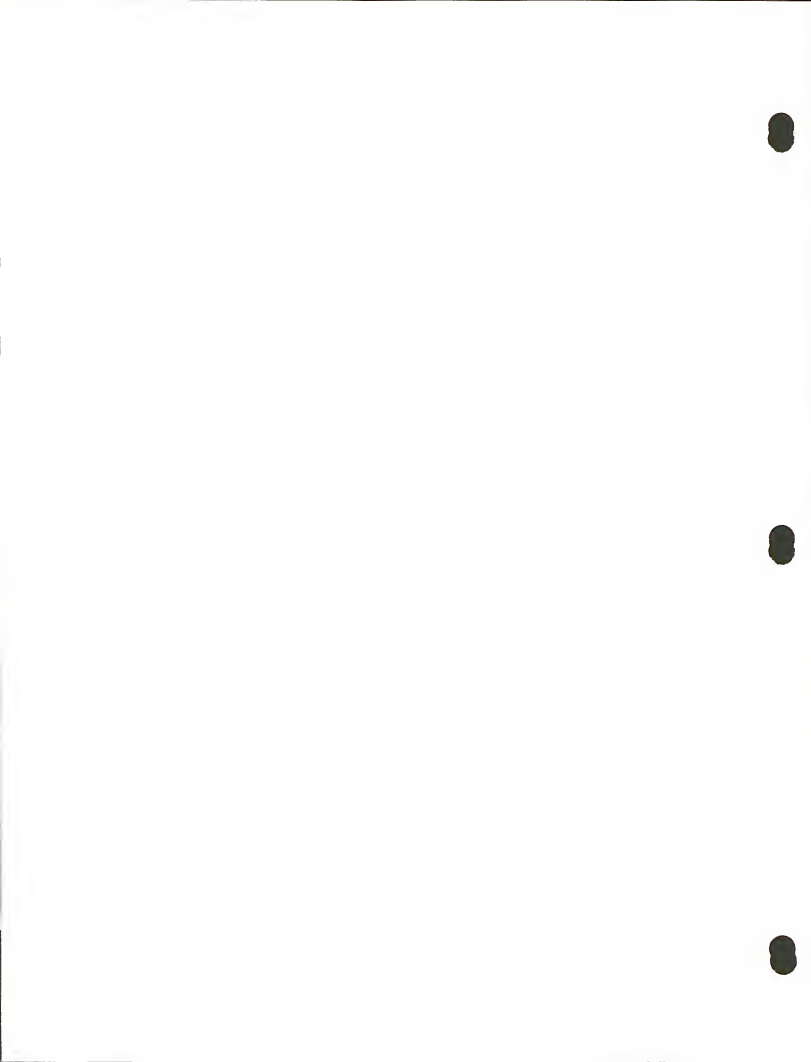


FUEL TYPES

-  Forested Land With Shrub Understory
-  Forested Land With Grass Understory
-  Grassland And Cropland



Map No. 5

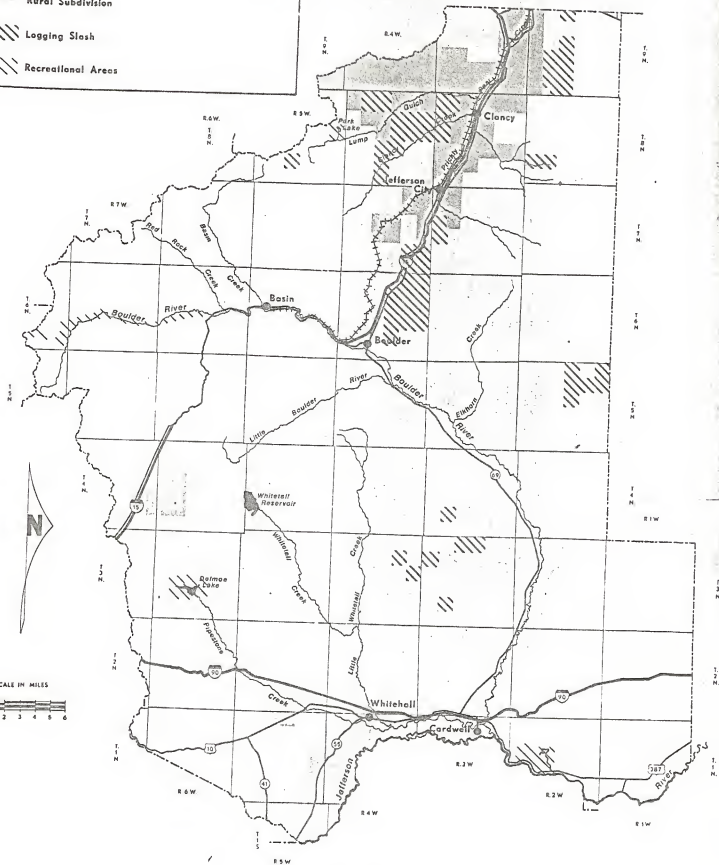


8.3 W. 8.3 W.

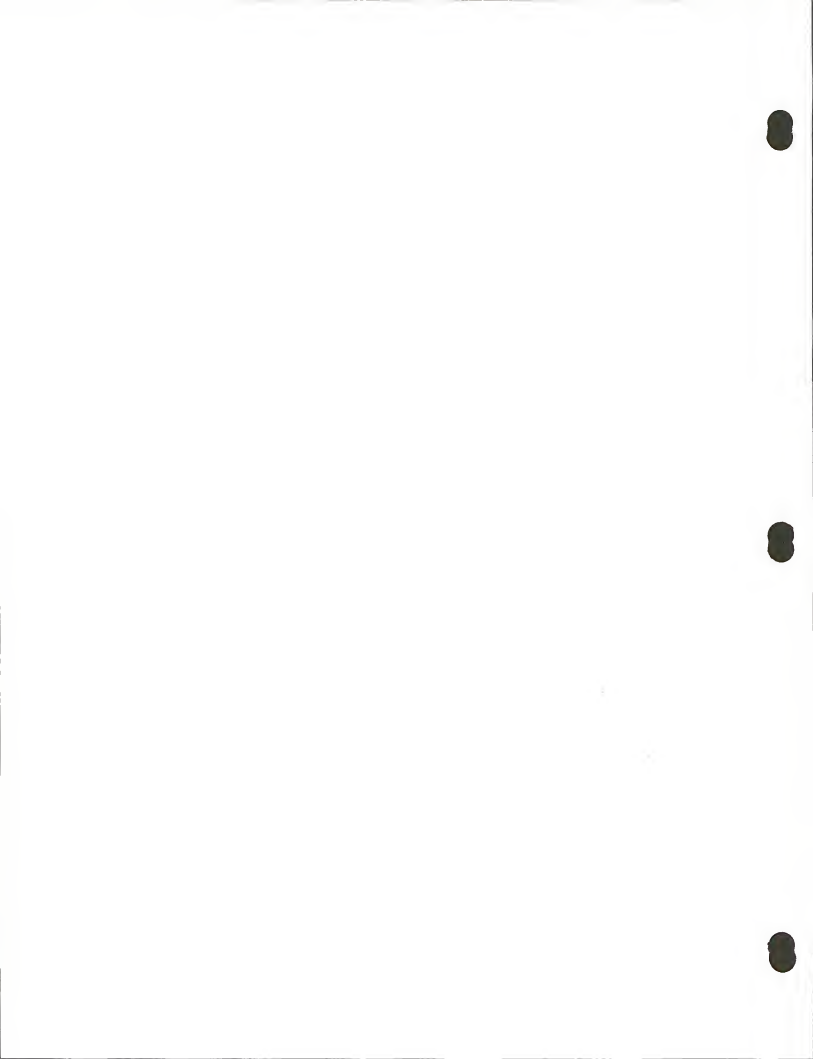
Rural Subdivision

 Logging Slash

 Water
 Forest
 Agricultural
 Residential
 Commercial
 Industrial
 Road
 Recreational Areas



Map No. 6



SECONDARY ROADS AND VEHICLE ACCESS

- Improved Road
- Unimproved Road

NOTE: All Interstate and primary roads shown in gray.

